

Patent Claims

1. A method for level control in a pneumatic level control of a motor vehicle having at least two
5 axles, at least one air spring (2a, 2b) per axle, if appropriate one or more pressure accumulators (3), at least one pressure sensor (24), means for determining the distance between at least one wheel and/or axle and the vehicle body (16, 18,
10 20, 22), a control unit (10) and a compressor (12), in which the axles are successively adjusted from a starting level to a desired level, in which during a positive-adjustment operation at least from time to time the compressor (12) is operated
15 and/or a connection is established between at least one air spring (2a, 2b) and the pressure accumulator (3), and in which the positive-adjustment operation of the air spring (2a, 2b) or the air springs (2, 2b) at an axle from a starting
20 level to a higher desired level is interrupted by the control unit (10) if at least one switch-off condition of the compressor (12) has been fulfilled and/or the pressure level in the pressure accumulator (3) is too low, characterized
25 in that the level at all the axles of the motor vehicle is adjusted to a common height intermediate level, which is closer to the desired level than the starting level, so that the vehicle is no longer leaning.
30
2. The method as claimed in claim 1, characterized in that the intermediate level after the positive-adjustment operation has been interrupted and before the adjustment operation to the common
35 height intermediate level begins is determined.
3. The method as claimed in claim 1 and/or claim 2, characterized in that the intermediate level

corresponds to the lowest actual level of one of the axles of the motor vehicle.

4. The method as claimed in one or more of the preceding claims, characterized in that the intermediate level is set on the basis of air exchange between the corresponding air springs (2a, 2b) of the respective axles of the motor vehicle, without air being released from the corresponding air springs (2a, 2b) of the level control system to the environment.
5. The method as claimed in one or more of the preceding claims, characterized in that the positive-adjustment operation of an air spring (2a, 2b) or of the air springs (2a, 2b) at the axles which has been interrupted as described in claim 1 is continued to the desired level if a switch-on condition of the compressor (12) is fulfilled, with the intermediate level corresponding to the starting level as described in claim 1.
6. The method as claimed in one or more of the preceding claims, characterized in that the switch-off condition of the compressor (12) is an upper limit temperature.
7. The method as claimed in claim 6, characterized in that the upper limit temperature is determined directly at the compressor (12) or in the vicinity of the compressor.
8. The method as claimed in one or more of the preceding claims, characterized in that the switch-on condition of the compressor (12) is a lower limit temperature.
9. The method as claimed in claim 8, characterized in

that the lower limit temperature is determined directly at the compressor (12) or in the vicinity of the compressor.

- 5 10. The method as claimed in one or more of the preceding claims, characterized in that the switch-off condition is a lower pressure threshold in the pressure accumulator (3).
- 10 11. A level control system of a motor vehicle having at least two axles, at least one air spring (2a, 2b) per axle, if appropriate one or more pressure accumulators (3), at least one pressure sensor (24), means for determining the distance between
15 at least one wheel and/or axle and the vehicle body of the motor vehicle (16, 18, 20, 22), a control unit (10) and a compressor (12), in which the axles are successively adjusted from a starting level to a desired level, in which during
20 a positive-adjustment operation at least from time to time the compressor (12) is operated and/or a connection is established between at least one air spring (2a, 2b) and the pressure accumulator (3), and in which the positive-adjustment operation of
25 the air spring (2a, 2b) or the air springs (2a, 2b) at an axle from a starting level to a higher desired level is interrupted by the control unit (10) if at least one switch-off condition of the compressor (12) has been fulfilled and/or the
30 pressure level in the pressure accumulator (3) is too low, characterized in that a common height intermediate level for all the axles or air springs (2a, 2b) with respect to the vehicle body, which is closer to the desired level than the
35 starting level, is determined in the control unit (10), and in that the level at all the axles or air springs (2a, 2b) of the motor vehicle is adjusted to the common height intermediate level, so that the vehicle is no longer leaning.

12. The level control system as claimed in claim 11,
characterized in that the level control system is
used to carry out a method as claimed in claims 2
5 to 10.
13. The level control system as claimed in claim 11
for carrying out the method as claimed in claim 7
and/or 9, characterized in that a temperature
10 sensor (26) is arranged on the cylinder head of
the compressor (12) or outside or inside the
electric motor of the compressor (12).